# NEUROPHARMACOLOGY

# CONTENTS OF VOLUME 42

## NUMBER 1


| | | |
|---|---|---|
| **S. Kanumilli, N.J. Toms, K. Venkateswarlu, H. Mellor, P.J. Roberts** | Functional coupling of rat metabotropic glutamate 1a receptors to phospholipase D in CHO cells: involvement of extracellular $Ca^{2+}$, protein kinase C, tyrosine kinase and Rho-A | 1 |
| **D.B. Pereira, A.P. Carvalho, C.B. Duarte** | Non-specific effects of the MEK inhibitors PD098,059 and U0126 on glutamate release from hippocampal synaptosomes | 9 |
| **M. Díaz-Hernández, J. Pintor, E. Castro, M.T. Miras-Portugal** | Co-localisation of functional nicotinic and ionotropic nucleotide receptors in isolated cholinergic synaptic terminals | 20 |
| **W. Hevers, H. Lüddens** | Pharmacological heterogeneity of γ-aminobutyric acid receptors during development suggests distinct classes of rat cerebellar granule cells in situ | 34 |
| **G.C.D. Eichenberger, S.J. Ribeiro, M.Y. Osaki, R.Y. Maruoka, G.C.C. Resende, L. Castellan-Baldan, S.A.L. Corrêa, L.A. Da Silva, N.C. Coimbra** | Neuroanatomical and psychopharmacological evidence for interaction between opioid and GABAergic neural pathways in the modulation of fear and defense elicited by electrical and chemical stimulation of the deep layers of the superior colliculus and dorsal periaqueductal gray matter | 48 |
| **M.T. Vilaró, T. Doménech, J.M. Palacios, G. Mengod** | Cloning and characterization of a novel human 5-$HT_4$ receptor variant that lacks the alternatively spliced carboxy terminal exon. RT-PCR distribution in human brain and periphery of multiple 5-$HT_4$ receptor variants | 60 |
| **D.R. Thomas, P.J. Atkinson, P.G. Hastie, J.C. Roberts, D.N. Middlemiss, G.W. Price** | [$^3$H]-SB-269970 radiolabels 5-$HT_7$ receptors in rodent, pig and primate brain tissues | 74 |
| **C.H. Gill, E.M. Soffin, J.J. Hagan, C.H. Davies** | 5-$HT_7$ receptors modulate synchronized network activity in rat hippocampus | 82 |
| **J. Pollock, S.M. McFarlane, M.C. Connell, U. Zehavi, P. Vandenabeele, D.J. MacEwan, R.H. Scott** | TNF-α receptors simultaneously activate $Ca^{2+}$ mobilisation and stress kinases in cultured sensory neurones | 93 |
| **M. Jeub, H. Beck, E. Siep, C. Rüschenschmidt, E.-J. Speckmann, U. Ebert, H. Potschka, C. Freichel, E. Reissmüller, W. Löscher** | Effect of phenytoin on sodium and calcium currents in hippocampal CA1 neurons of phenytoin-resistant kindled rats | 107 |
| **A. Barbelivien, J. Jolkkonen, E. Rutkauskaite, J. Sirviö, J. Sivenius** | Differentially altered cerebral metabolism in ischemic rats by $\alpha_2$-adrenoceptor blockade and its relation to improved limb-placing reactions | 117 |
| **E.M. Soffin, M.L. Evans, C.H. Gill, M.H. Harries, C.D. Benham, C.H. Davies** | SB-334867-A antagonises orexin mediated excitation in the locus coeruleus | 127 |
| **M. Odorizzi, B. Fernette, E. Angel, C. Burlet, P. Tankosic, A. Burlet** | Galanin receptor antagonists decrease fat preference in Brattleboro rat | 134 |


## NUMBER 2


| | | |
|---|---|---|
| **J.T. Lazzaro, A.V. Paternain, J. Lerma, B.L. Chenard, F.E. Ewing, J. Huang, W.M. Welch, A.H. Ganong, F.S. Menniti** | Functional characterization of CP-465,022, a selective, noncompetitive AMPA receptor antagonist | 143 |
| **H.C. Dringenberg, P. Diavolitsis** | Electroencephalographic activation by fluoxetine in rats: role of 5-$HT_{1A}$ receptors and enhancement of concurrent acetylcholinesterase inhibitor treatment | 154 |
| **S.K. Hemrick-Luecke, D.C. Evans** | Comparison of the potency of MDL 100,907 and SB 242084 in blocking the serotonin $(5\text{-HT})_2$ receptor agonist-induced increases in rat serum corticosterone concentrations: evidence for 5-$HT_{2A}$ receptor mediation of the HPA axis | 162 |
| **K.J. Frantz, K.J. Hansson, D.G. Stouffer, L.H. Parsons** | 5-$HT_6$ receptor antagonism potentiates the behavioral and neurochemical effects of amphetamine but not cocaine | 170 |
| **S.X.-M. Li, K.W. Perry, D.T. Wong** | Influence of fluoxetine on the ability of bupropion to modulate extracellular dopamine and norepinephrine concentrations in three mesocorticolimbic areas of rats | 181 |
| **P. Follesa, L. Mancuso, F. Biggio, E. Cagetti, M. Franco, G. Trapani, G. Biggio** | Changes in $GABA_A$ receptor gene expression induced by withdrawal of, but not by long-term exposure to, zaleplon or zolpidem | 191 |

| | | |
|---|---|---|
| **Y. He, A. Benz, T. Fu, M. Wang, D.F. Covey, C.F. Zorumski, S. Mennerick** | Neuroprotective agent riluzole potentiates postsynaptic $GABA_A$ receptor function | 199 |
| **A.I. Herrero, N. Del Olmo, J.R. González-Escalada, J.M. Solís** | Two new actions of topiramate: inhibition of depolarizing $GABA_A$-mediated responses and activation of a potassium conductance | 210 |
| **D.F. Boyd, A. Mathie** | Inhibition of the potassium current $IK_{SO}$, in cerebellar granule cells, by the inhibitors of MEK1 activation, PD 98059 and U 0126 | 221 |
| **K. Fink, D.J. Dooley, W.P. Meder, N. Suman-Chauhan, S. Duffy, H. Clusmann, M. Göthert** | Inhibition of neuronal $Ca^{2+}$ influx by gabapentin and pregabalin in the human neocortex | 229 |
| **A.R. Cools, L. Lubbers, R.V. van Oosten, G. Andringa** | SKF 83959 is an antagonist of dopamine D1-like receptors in the prefrontal cortex and nucleus accumbens: a key to its antiparkinsonian effect in animals? | 237 |
| **L.-C. Chiou, S.-H. Fan, R. Guerrini, G. Caló** | [$Nphe^1$]N/OFQ-(1-13)-$NH_2$ is a competitive and selective antagonist at nociceptin/orphanin FQ receptors mediating $K^+$ channel activation in rat periaqueductal gray slices | 246 |
| **H.E. Shannon, E.A. Lutz** | Comparison of the peripheral and central effects of the opioid agonists loperamide and morphine in the formalin test in rats | 253 |
| **B. Zhang, L. Yang, Y. Konishi, N. Maeda, M. Sakanaka, J. Tanaka** | Suppressive effects of phosphodiesterase type IV inhibitors on rat cultured microglial cells: comparison with other types of cAMP-elevating agents | 262 |
| **M.J. Moreno, J.A. Terrón, D.B. Stanimirovic, H. Doods, E. Hamel** | Characterization of calcitonin gene-related peptide (CGRP) receptors and their receptor-activity-modifying proteins (RAMPs) in human brain microvascular and astroglial cells in culture | 270 |
| **A. Blume, C. Neumann, M. Dorenkamp, J. Culman, T. Unger** | Involvement of adrenoceptors in the angiotensin II-induced expression of inducible transcription factors in the rat forebrain and hypothalamus | 281 |


## NUMBER 3


| | | |
|---|---|---|
| **S. Prisco, S. Natoli, G. Bernardi, N.B. Mercuri** | Group I metabotropic glutamate receptors activate burst firing in rat midbrain dopaminergic neurons | 289 |
| **D. Dietrich, T. Kral, H. Clusmann, M. Friedl, J. Schramm** | Presynaptic group II metabotropic glutamate receptors reduce stimulated and spontaneous transmitter release in human dentate gyrus | 297 |
| **J.-H. Luo, Z.-Y. Fu, G. Losi, B.G. Kim, K. Prybylowski, B. Vissel, S. Vicini** | Functional expression of distinct NMDA channel subunits tagged with green fluorescent protein in hippocampal neurons in culture | 306 |
| **P.L. Chazot, S. Lawrence, C.L. Thompson** | Studies on the subtype selectivity of CP-101,606: evidence for two classes of NR2B-selective NMDA receptor antagonists | 319 |
| **P. Follesa, P. Porcu, C. Sogliano, M. Cinus, F. Biggio, L. Mancuso, M.C. Mostallino, A.M. Paoletti, R.H. Purdy, G. Biggio, A. Concas** | Changes in $GABA_A$ receptor $\gamma_2$ subunit gene expression induced by long-term administration of oral contraceptives in rats | 325 |
| **K. Nishikawa, A. Jenkins, I. Paraskevakis, N.L. Harrison** | Volatile anesthetic actions on the $GABA_A$ receptors: contrasting effects of $\alpha$1(S270) and $\beta$2(N265) point mutations | 337 |
| **P. Poulain, D.G. Margineanu** | Levetiracetam opposes the action of $GABA_A$ antagonists in hypothalamic neurones | 346 |
| **D.J. Martin, D. McClelland, M.B. Herd, K.G. Sutton, M.D. Hall, K. Lee, R.D. Pinnock, R.H. Scott** | Gabapentin-mediated inhibition of voltage-activated $Ca^{2+}$ channel currents in cultured sensory neurones is dependent on culture conditions and channel subunit expression | 353 |
| **G. Battaglia, C.L. Busceti, L. Cuomo, F.S. Giorgi, F. Orzi, A. De Blasi, F. Nicoletti, S. Ruggieri, F. Fornai** | Continuous subcutaneous infusion of apomorphine rescues nigro-striatal dopaminergic terminals following MPTP injection in mice | 367 |
| **C. Donaldson, P.M. Boers, K.L. Hoskin, A.S. Zagami, G.A. Lambert** | The role of 5-$HT_{1B}$ and 5-$HT_{1D}$ receptors in the selective inhibitory effect of naratriptan on trigeminovascular neurons | 374 |
| **S.G. Salih, D.J. Jagger, G.D. Housley** | ATP-gated currents in rat primary auditory neurones in situ arise from a heteromultimetric P2X receptor subunit assembly | 386 |
| **J.P. Hannon, C. Petrucci, D. Fehlmann, C. Viollet, J. Epelbaum, D. Hoyer** | Somatostatin $sst_2$ receptor knock-out mice: localisation of $sst_{1-5}$ receptor mRNA and binding in mouse brain by semi-quantitative RT–PCR, in situ hybridisation histochemistry and receptor autoradiography | 396 |
| **M.D. Black, J. Simmonds, Y. Senyah, J.G. Wettstein** | Neonatal nitric oxide synthase inhibition: social interaction deficits in adulthood and reversal by antipsychotic drugs | 414 |
| **Z. Penke, B. Fernette, C. Nyakas, J.-P. Max, A. Burlet** | Neonatal maternal deprivation modifies feeding in response to pharmacological and behavioural factors in adult rats | 421 |
| **V. Girod, J. Dapzol, M. Bouvier, L. Grélot** | The COX inhibitors indomethacin and meloxicam exhibit anti-emetic activity against cisplatin-induced emesis in piglets | 428 |

## NUMBER 4


| | | |
|---|---|---|
| **S.C.R. Lummis, E.J. Fletcher, T. Green** | Identification of a new site in the S1 ligand binding region of the NMDA receptor NR2A subunit involved in receptor activation by glutamate | 437 |
| **A. Jouvenceau, B. Potier, F. Poindessous-Jazat, P. Dutar, A. Slama, J. Epelbaum, J.-M. Billard** | Decrease in calbindin content significantly alters LTP but not NMDA receptor and calcium channel properties | 444 |
| **O. Godukhin, A. Savin, S. Kalemenev, S. Levin** | Neuronal hyperexcitability induced by repeated brief episodes of hypoxia in rat hippocampal slices: involvement of ionotropic glutamate receptors and L-type $Ca^{2+}$ channels | 459 |
| **S. Gullapalli, P. Ramarao** | L-type $Ca^{2+}$ channel modulation by dihydropyridines potentiates κ-opioid receptor agonist induced acute analgesia and inhibits development of tolerance in rats | 467 |
| **K. Wirkner, L. Köles, S. Thümmler, J. Luthardt, W. Poelchen, H. Franke, S. Fürst, P. Illes** | Interaction between P2Y and NMDA receptors in layer V pyramidal neurons of the rat prefrontal cortex | 476 |
| **S. Amadio, N. D'Ambrosi, F. Cavaliere, B. Murra, G. Sancesario, G. Bernardi, G. Burnstock, C. Volonté** | P2 receptor modulation and cytotoxic function in cultured CNS neurons | 489 |
| **L.J. Greenfield Jr., S.H. Zaman, M.L. Sutherland, S.C.R. Lummis, M.-I. Niemeyer, E.A. Barnard, R.L. Macdonald** | Mutation of the $GABA_A$ receptor M1 transmembrane proline increases GABA affinity and reduces barbiturate enhancement | 502 |
| **M.F.M. Braga, V. Aroniadou–Anderjaska, R.M. Post, H. Li** | Lamotrigine reduces spontaneous and evoked $GABA_A$ receptor-mediated synaptic transmission in the basolateral amygdala: implications for its effects in seizure and affective disorders | 522 |
| **M. Shoaib, J. Gommans, A. Morley, I.P. Stolerman, R. Grailhe, J.-P. Changeux** | The role of nicotinic receptor beta-2 subunits in nicotine discrimination and conditioned taste aversion | 530 |
| **S.-E. Tan** | Impairing the amphetamine conditioning in rats through the inhibition of hippocampal calcium/calmodulin-dependent protein kinase II activity | 540 |
| **P.J. Scarpace, M. Matheny, Y. Zhang, N. Tümer, C.D. Frase, E.W. Shek, B. Hong, V. Prima, S. Zolotukhin** | Central leptin gene delivery evokes persistent leptin signal transduction in young and aged-obese rats but physiological responses become attenuated over time in aged-obese rats | 548 |
| **D. Giuliani, A. Ottani, F. Ferrari** | Influence of sildenafil on copulatory behaviour in sluggish or normal ejaculator male rats: a central dopamine mediated effect? | 562 |
| **M.J. Moreno, R. Abounader, E. Hébert, H. Doods, E. Hamel** | Efficacy of the non-peptide CGRP receptor antagonist BIBN4096BS in blocking CGRP-induced dilations in human and bovine cerebral arteries: potential implications in acute migraine treatment | 568 |
| **S.P. Brooks, G. Hennebry, G.P.R. McAlpin, G. Norman, H.J. Little** | Nimodipine prevents the effects of ethanol in tests of memory | 577 |


## NUMBER 5


| | | |
|---|---|---|
| *Mini-review* | | |
| **U. Gerber** | G-protein-coupled receptors, tyrosine kinases and neurotransmission | 587 |
| *Interactive report* | | |
| **J.J. Krupp, B. Vissel, C.G. Thomas, S.F. Heinemann, G.L. Westbrook** | Calcineurin acts via the C-terminus of NR2A to modulate desensitization of NMDA receptors | 593 |
| **G. Casassus, C. Mulle** | Functional characterization of kainate receptors in the mouse nucleus accumbens | 603 |
| **L.R.F. Faro, J.L.M. do Nascimento, M. Alfonso, R. Durán** | Protection of methylmercury effects on the in vivo dopamine release by NMDA receptor antagonists and nitric oxide synthase inhibitors | 612 |
| **C.D. Bonavita, V. Bisagno, C.G. Bonelli, G.B. Acosta, M.C. Rubio, S.I. Wikinski** | Tolerance to the sedative effect of lorazepam correlates with a diminution in cortical release and affinity for glutamate | 619 |
| **V. Dobrovitsky, P. Pimentel, A. Duarte, W. Froestl, J.R. Stellar, M. Trzcińska** | CGP 44532, a $GABA_B$ receptor agonist, is hedonically neutral and reduces cocaine-induced enhancement of reward | 626 |
| **M.A. Pezze, J. Feldon, C.A. Murphy** | Increased conditioned fear response and altered balance of dopamine in the shell and core of the nucleus accumbens during amphetamine withdrawal | 633 |
| **K. Tomiyama, F.N. McNamara, J.J. Clifford, A. Kinsella, J. Drago, O. Tighe, D.T. Croke, N. Koshikawa, J.L. Waddington** | Phenotypic resolution of spontaneous and $D_1$-like agonist-induced orofacial movement topographies in congenic dopamine $D_{1A}$ receptor 'knockout' mice | 644 |

| | | |
|---|---|---|
| **F.M. Leslie, K.A. Gallardo, M.K. Park** | Nicotinic acetylcholine receptor-mediated release of [$^3$H]norepinephrine from developing and adult rat hippocampus: direct and indirect mechanisms | 653 |
| **Q.-T. Nguyen, R. Miledi** | Inhibition of skeletal muscle nicotinic receptors by the atypical antipsychotic clozapine | 662 |
| **Q.-T. Nguyen, J. Yang, R. Miledi** | Effects of atypical antipsychotics on vertebrate neuromuscular transmission | 670 |
| **M.J. Millan, S. Girardon, J. Mullot, M. Brocco, A. Dekeyne** | Stereospecific blockade of marble-burying behaviour in mice by selective, non-peptidergic neurokinin$_1$ ($NK_1$) receptor antagonists | 677 |
| **A. Khorchid, Q. Cui, E. Molina-Holgado, G. Almazan** | Developmental regulation of $\alpha_{1A}$-adrenoceptor function in rat brain oligodendrocyte cultures | 685 |
| **B.N. Mallick, S.K. Jha, F. Islam** | Presence of α-1 adrenoreceptors on thermosensitive neurons in the medial preoptico-anterior hypothalamic area in rats | 697 |
| **L. Van Den Bosch, P. Van Damme, V. Vleminckx, E. Van Houtte, G. Lemmens, L. Missiaen, G. Callewaert, W. Robberecht** | An α-mercaptoacrylic acid derivative (PD150606) inhibits selective motor neuron death via inhibition of kainate-induced $Ca^{2+}$ influx and not via calpain inhibition | 706 |
| **S. Kikuchi, K. Shinpo, M. Niino, S. Tsuji, K. Iwabuchi, K. Onoé, K. Tashiro** | Prostaglandin $E_1$ protects cultured spinal neurons against the effects of nitric oxide toxicity | 714 |
| **T.E. Cullingford, C.T. Dolphin, H. Sato** | The peroxisome proliferator-activated receptor α-selective activator ciprofibrate upregulates expression of genes encoding fatty acid oxidation and ketogenesis enzymes in rat brain | 724 |
| **L.-P. Zou, N. Abbas, I. Volkmann, I. Nennesmo, M. Levi, B. Wahren, B. Winblad, G. Hedlund, J. Zhu** | Suppression of experimental autoimmune neuritis by ABR-215062 is associated with altered Th1/Th2 balance and inhibited migration of inflammatory cells into the peripheral nerve tissue | 731 |


## NUMBER 6


| | | |
|---|---|---|
| **F. Moroni, S. Attucci, A. Cozzi, E. Meli, R. Picca, M.A. Scheideler, R. Pellicciari, C. Noe, I. Sarichelou, D.E. Pellegrini-Giampietro** | The novel and systemically active metabotropic glutamate 1 (mGlu1) receptor antagonist 3-MATIDA reduces post-ischemic neuronal death | 741 |
| **M.G.P. Feenstra, M.H.A. Botterblom, J.F.M. van Uum** | Behavioral arousal and increased dopamine efflux after blockade of NMDA-receptors in the prefrontal cortex are dependent on activation of glutamatergic neurotransmission | 752 |
| **A. Mori, Y. Noda, T. Nagai, T. Mamiya, H. Furukawa, T. Nabeshima** | Involvement of dopaminergic system in the nucleus accumbens in the discriminative stimulus effects of phencyclidine | 764 |
| **Z.-T. Zhu, K.-Z. Shen, S.W. Johnson** | Pharmacological identification of inward current evoked by dopamine in rat subthalamic neurons in vitro | 772 |
| **M.L. Barbaccia, G. Colombo, D. Affricano, M.A.M. Carai, G. Vacca, S. Melis, R.H. Purdy, G.L. Gessa** | $GABA_B$ receptor-mediated increase of neurosteroids by γ-hydroxybutyric acid | 782 |
| **M.J. Hansen, M.J. Morris** | Evidence for an interaction between neuropeptide Y and the melanocortin-4 receptor on feeding in the rat | 792 |
| **H. Husum, E. Termeer, A.A. Mathé, T.G. Bolwig, B.A. Ellenbroek** | Early maternal deprivation alters hippocampal levels of neuropeptide Y and calcitonin-gene related peptide in adult rats | 798 |
| **F. Peña, J. Bargas, R. Tapia** | Paired pulse facilitation is turned into paired pulse depression in hippocampal slices after epilepsy induced by 4-aminopyridine in vivo | 807 |
| **J. Garzón, M. Rodríguez-Díaz, A. López-Fando, A. García-España, P. Sánchez-Blázquez** | Glycosylated phosducin-like protein long regulates opioid receptor function in mouse brain | 813 |
| **S. Hu, W.S. Sheng, J.R. Lokensgard, P.K. Peterson** | Morphine induces apoptosis of human microglia and neurons | 829 |
| **X. Deng, N.-S. Cai, M.T. McCoy, W. Chen, M.A. Trush, J.L. Cadet** | Methamphetamine induces apoptosis in an immortalized rat striatal cell line by activating the mitochondrial cell death pathway | 837 |
| **J. Krupinski, I. Ferrer, M. Barrachina, J.J. Secades, J. Mercadal, R. Lozano** | CDP-choline reduces pro-caspase and cleaved caspase-3 expression, nuclear DNA fragmentation, and specific PARP-cleaved products of caspase activation following middle cerebral artery occlusion in the rat | 846 |
| **P.J. Pauwels, I. Rauly, T. Wurch, F.C. Colpaert** | Evidence for protean agonism of RX 831003 at $\alpha_{2A}$-adrenoceptors by co-expression with different $G_\alpha$ protein subunits | 855 |
| **B. Safieh-Garabedian, S. Poole, J.J. Haddad, C.A. Massaad, S.J. Jabbur, N.E. Saadé** | The role of the sympathetic efferents in endotoxin-induced localized inflammatory hyperalgesia and cytokine upregulation | 864 |

## NUMBER 7


*Review*

| | | |
|---|---|---|
| **C.D. Benham, J.B. Davis, A.D. Randall** | Vanilloid and TRP channels: a family of lipid-gated cation channels | 873 |
| **V.R.J. Clarke, G.L. Collingridge** | Characterisation of the effects of ATPA, a $GLU_{K5}$ receptor selective agonist, on excitatory synaptic transmission in area CA1 of rat hippocampal slices | 889 |
| **H. Xiong, T. Futamura, H. Jourdi, H. Zhou, N. Takei, M. Diverse-Pierluissi, S. Plevy, H. Nawa** | Neurotrophins induce BDNF expression through the glutamate receptor pathway in neocortical neurons | 903 |
| **S.N. Kolbaev, I.N. Sharonova, V.S. Vorobjev, V.G. Skrebitsky** | Mechanisms of $GABA_A$ receptor blockade by millimolar concentrations of furosemide in isolated rat Purkinje cells | 913 |
| **J.L. Fisher** | A histidine residue in the extracellular N-terminal domain of the $GABA_A$ receptor $\alpha5$ subunit regulates sensitivity to inhibition by zinc | 922 |
| **P. Wellendorph, M.W. Goodman, E.S. Burstein, N.R. Nash, M.R. Brann, D.M. Weiner** | Molecular cloning and pharmacology of functionally distinct isoforms of the human histamine $H_3$ receptor | 929 |
| **A.R. Ase, J. Sénécal, T.A. Reader, R. Hen, L. Descarries** | Decreased G-protein coupling of serotonin 5-$HT_{1A}$ receptors in the brain of 5-$HT_{1B}$ knockout mouse | 941 |
| **F.C. Abogadie, R. Bron, S.J. Marsh, L.J. Drew, J.E. Haley, N.J. Buckley, D.A. Brown, P. Delmas** | Adenovirus-mediated $G\alpha_q$-protein antisense transfer in neurons replicates $G\alpha_q$ gene knockout strategies | 950 |
| **D.P. Finn, M.D. Lalies, M.S. Harbuz, D.S. Jessop, A.L. Hudson, D.J. Nutt** | Imidazoline$_2$ ($I_2$) binding site- and $\alpha_2$-adrenoceptor-mediated modulation of central noradrenergic and HPA axis function in control rats and chronically stressed rats with adjuvant-induced arthritis | 958 |
| **H.C. Ellington, M.A. Cotter, N.E. Cameron, R.A. Ross** | The effect of cannabinoids on capsaicin-evoked calcitonin gene-related peptide (CGRP) release from the isolated paw skin of diabetic and non-diabetic rats | 966 |
| **A.N. Mead, J.L. Katz, B.A. Rocha** | Intravenous cocaine-induced activity in A/J and C57BL/6J mice: behavioral sensitization and conditioned activity | 976 |
| **L.-C. Chiou, S.-H. Fan** | CompB (J-113397), selectively and competitively antagonizes nociceptin activation of inwardly rectifying $K^+$ channels in rat periaqueductal gray slices | 987 |


## NUMBER 8


*Review*

| | | |
|---|---|---|
| **S.N. Davies, R.G. Pertwee, G. Riedel** | Functions of cannabinoid receptors in the hippocampus | 993 |
| **F. Matrisciano, M. Storto, R.T. Ngomba, I. Cappuccio, A. Caricasole, S. Scaccianoce, B. Riozzi, D. Melchiorri, F. Nicoletti** | Imipramine treatment up-regulates the expression and function of mGlu2/3 metabotropic glutamate receptors in the rat hippocampus | 1008 |
| **M. Śmiałowska, B. Szewczyk, P. Brański, J.M. Wierońska, A. Pałucha, M. Bajkowska, A. Pilc** | Effect of chronic imipramine or electroconvulsive shock on the expression of mGluR1a and mGluR5a immunoreactivity in rat brain hippocampus | 1016 |
| **Z. Rogóż, G. Skuza, J. Maj, W. Danysz** | Synergistic effect of uncompetitive NMDA receptor antagonists and antidepressant drugs in the forced swimming test in rats | 1024 |
| **C. Shen, H. Li, E. Meller** | Repeated treatment with antidepressants differentially alters 5-$HT_{1A}$ agonist-stimulated [$^{35}$S]GTP$\gamma$S binding in rat brain regions | 1031 |
| **A.M. Thompson, B.A. Gosnell, J.J. Wagner** | Enhancement of long-term potentiation in the rat hippocampus following cocaine exposure | 1039 |
| **R.R. Matsumoto, K.A. McCracken, B. Pouw, Y. Zhang, W.D. Bowen** | Involvement of sigma receptors in the behavioral effects of cocaine: evidence from novel ligands and antisense oligodeoxynucleotides | 1043 |
| **H. Sawada, M. Ibi, T. Kihara, K. Honda, T. Nakamizo, R. Kanki, M. Nakanishi, N. Sakka, A. Akaike, S. Shimohama** | Estradiol protects dopaminergic neurons in a $MPP^+$ Parkinson's disease model | 1056 |
| **A. Bergevin, D. Girardot, M.-J. Bourque, L.-E. Trudeau** | Presynaptic $\mu$-opioid receptors regulate a late step of the secretory process in rat ventral tegmental area GABAergic neurons | 1065 |
| **J.I. Mobarakeh, S. Sakurada, T. Hayashi, T. Orito, K. Okuyama, T. Sakurada, A. Kuramasu, T. Watanabe, T. Watanabe, K. Yanai** | Enhanced antinociception by intrathecally-administered morphine in histamine $H_1$ receptor gene knockout mice | 1079 |
| **H.M.K. Nguyen, C.M. Cahill, P.S. McPherson, A. Beaudet** | Receptor-mediated internalization of [$^3$H]–neurotensin in synaptosomal preparations from rat neostriatum | 1089 |
| **K. Kato, M. Wakamori, Y. Mori, K. Imoto, K. Kitamura** | Inhibitory effects of cilnidipine on peripheral and brain N-type $Ca^{2+}$ channels expressed in BHK cells | 1099 |
| **J.-A. Kim, K. Mitsukawa, M.K. Yamada, N. Nishiyama, N. Matsuki, Y. Ikegaya** | Cytoskeleton disruption causes apoptotic degeneration of dentate granule cells in hippocampal slice cultures | 1109 |